Job Description: Electronic Hardware Test Engineer (Characterization Engineer)
Location: Paarl, Western Cape, South Africa
Employment Type: Permanent, On-site
Education Level: M.Eng or B.Eng Electronics
Experience Level: 2 - 5 years practical experience

About Azoteq

Azoteq, headquartered in Paarl, Western Cape, is a leading fabless semiconductor company specializing in innovative integrated circuits. We are seeking to recruit an **Electronic Hardware Test Engineer (Characterization Engineer)** to join our IC Group.

Role Summary

An Electronic Hardware Characterization Engineer will be involved in testing and characterization of integrated circuit (IC) microcontrollers, analog sensors, and LED drivers.
Candidates must be able to understand and interpret **analog** and **digital** schematics to develop electronic hardware and associated firmware that will fully characterize the circuits.

Key Responsibilities

- **Testing and Validation:**
  Conduct tests to characterize the performance of electronic hardware, including microcontrollers and ASICs such as capacitive sensors, magnetic sensors, light sensors, and high-power LED drivers. Ensure compliance with design specifications and industry standards.
- **Data Analysis & Reporting:**
  Analyse test data to understand performance, identify root causes of failures, and prepare detailed characterization reports.
- **Troubleshooting:**
  Diagnose and resolve technical problems with hardware designs and performance.
- **Test Program Development:**
  Write and debug test programs for hardware characterization, ensuring accurate and time-efficient test systems.
- **Collaboration:**
  Collaborate with cross-functional teams to ensure successful integration of hardware components into complete systems.
- **Documentation:**
  Follow defined hardware design processes and contribute to documentation for hardware designs.
- **Additional Duties:**
  Support Azoteq products where required.

Perform other responsibilities as agreed from time to time.

Skills and Qualifications

- **Education:**
  M.Eng or B.Eng Electronics
- **Technical Skills:**
  o Embedded microprocessor development (e.g., Microchip PIC, STM8, STM32)
  o PCB design and layout
  o Scripting (e.g., Python)
  o Programming in C and C++
  o Analog simulation using SPICE-based simulators
  o FPGA development
  o Knowledge of integrated circuits
  o Experience with VHDL and Verilog (advantageous)
  o Experience using version control systems (e.g., Git) (advantageous)
  o Proficiency in Windows operating systems
  o Working knowledge of Quality Management Systems (QMS)
- **Core Competencies:**
  o Strong analytical and problem-solving skills
  o Systematic approach and well-organized work methodology
  o Excellent organizational and time management skills
  o Effective communication and teamwork abilities
  o Commitment to continuous learning and staying updated on advancements in electronic hardware technologies

Why Join Azoteq?

- Be part of a pioneering semiconductor company driving innovation in sensor and IC technology.
- Work in a collaborative environment with opportunities for professional growth.
- Contribute to cutting-edge projects in microcontrollers, sensors, and LED drivers.

Please forward your CV to louisa.havenga@azoteq.com
When applying, clearly indicate that the application is for the "**Electronic Hardware Test Engineer**" position and include your CV along with all relevant supporting information.